

## **REMARKS**

### **Summary of the Office Action**

In the Office Action mailed on February 5, 2010, the Examiner rejected claims 1-48 and 50-56 on the grounds of nonstatutory double patenting over:

claims 1-4, 9-14, 16, 18, 20-24, 27-38, 40, 41, 43, 45-48, and 50-55 ("the '387 claims"), of U.S. Patent App. No. 09/684,387 ("the '387 Application"), and

claims 1-32, 34-48, 50-63, 65-81, 83-85, 91, 92, 94, 95, 97, 99-101, 103, 106, and 108-119 ("the '706 claims") of U.S. Patent App. No. 09/684,706 ("the '706 Application").

The Examiner rejected claims 1-6, 8, 14-24, 30, 34, 39-45, 48, and 52-56 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,414,955 ("Clare") in view of Wesson et al., "Network Structures for Distributed Situation Assessment", IEEE Transactions on Systems, Man, and Cybernetics, Vol. 11, No. 1, pp. 5-23 ("Wesson") in view of U.S. Patent No. 6,038,436 ("Priest").

The Examiner rejected claims 25-29, 31, 32, 46, 47, 50, and 51 under U.S.C. § 103(a) as being unpatentable over Clare-Wesson-Priest in view of U.S. Patent No. 6,615,088 ("Myer").

The Examiner rejected claims 7, 9-13, 33, 35, and 36 under 35 U.S.C. § 103(a) as being unpatentable over Clare-Wesson-Priest in view of U.S. Patent No. 6,546,419 ("Humpleman").

The Examiner rejected claim 37 under 35 U.S.C. § 103(a) as being unpatentable over Clare-Wesson-Priest in view of U.S. Patent No. 5,742,829 ("Davis").

The Examiner rejected claim 38 under 35 U.S.C. § 103(a) as being unpatentable over Clare-Wesson-Priest in view of U.S. Patent Pub. No. 2002/0154631 ("Makansi").

### **Summary of April 13, 2010 Interview and Response to Interview Summary Mailed April 16, 2010**

On April 13, 2010, the Examiner and Tom Loos for the Applicant discussed the instant application. Prior to the interview, Applicant provided proposed amendments to claim 1, including amendments that recited "wherein modifying the assembly packet comprises: modifying the assembly packet to include a modified cluster indication, in response to the instruction being a become-base instruction, modifying the assembly packet to include a become-remote instruction, and in response to the instruction being a become-remote instruction, modifying the assembly packet to include a become-base instruction."

Applicant argued that these amendments should overcome the cited art. During the interview, the Examiner agreed that these amendments do overcome the cited art.

The Examiner requested information regarding related co-pending applications. Applicant has provided that information in the section below.

No other claims or art were discussed. No other pertinent issues were discussed.

The Applicant thanks the Examiner for sharing his time and expertise during the interview.

### **Related Applications**

The Applicant understands that the Examiner reviews the claims and prosecution history of related applications as they contain common subject matter. To this end, the Applicant reminds the Examiner that the present application is related through a common claim of priority to the following pending applications:

U.S. Patent Application No. 09/684,387, pending with Examiner Hussain in Art Unit 2451.

U.S. Patent Application No. 09/684,388, pending with Examiner Moorthy in Art Unit 2431.

U.S. Patent Application No. 09/680,608, pending with Examiner Mirza in Art Unit 2445.

U.S. Patent Application No. 09/684,706, pending with Examiner Sciacca in Art Unit 2446.

U.S. Patent Application No. 12/710,218, pending with no Examiner assigned in Art Unit 2412.

U.S. Patent Application No. 12/758,748, pending with no Examiner assigned in Art Unit 1661.

### **Status of the Claims**

Applicants have amended claims 1, 5, 8-10, 13, 15-18, 21, 22, 24-29, 31, 33, 37-39, 44, 46-48, and 50-56. No new matter has been added. Support for these amendments may be found generally throughout the application and specifically on at least page 49, line 17 – page 52, line 10 of the specification (use of assembly packets in flooding algorithm) as well as at least Figures 8-9 and 30-34.

Currently pending are claims 1-48 and 50-56, of which claims 1, 46, 48, 50, 51, 54, and 56 are independent claims, and the remaining claims are dependent claims.

## Response to Claim Rejections

1. Claim 1 is patentable over Clare in view of Wesson in view of Priest as the cited art does not disclose or suggest (1) “wherein the assembly packet includes a cluster indication and an instruction, wherein the instruction is either a become-base instruction or a become-remote instruction” and (2) “wherein modifying the assembly packet comprises: modifying the assembly packet to include a modified cluster indication, in response to the instruction being the become-base instruction, modifying the assembly packet to include the become-remote instruction, and in response to the instruction being the become-remote instruction, modifying the assembly packet to include the become-base instruction”, as recited in claim 1.

In claim 1, Applicants recite a method for operating a sensor network comprising a plurality of nodes. The method includes “receiving an assembly packet from a first node at at least one node neighboring the first node.” Applicants have amended claim 1 to recite that the “assembly packet includes a cluster indication and an instruction, wherein the instruction is either a become-base instruction or a become-remote instruction.” The cited references do not disclose or suggest that “the assembly packet includes a cluster indication and an instruction, wherein the instruction is either a become-base instruction or a become-remote instruction.”

Further, Applicants have amended claim 1 to recite:

“in response to reception of the assembly packet at the at least one node,  
in response to the at least one node having received a previous assembly packet, the at least one node ignores the assembly packet, and  
in response to the at least one node not having received a previous assembly packet, the at least one node determining a cluster for the node based on the cluster indication in the assembly packet, modifying the assembly packet, and transmitting the modified assembly packet to at least one neighboring node, wherein modifying the assembly packet comprises:  
modifying the assembly packet to include a modified cluster indication,  
in response to the instruction being the become-base instruction, modifying the assembly packet to include the become-remote instruction, and  
in response to the instruction being the become-remote instruction, modifying the assembly packet to include the become-base instruction.”

The cited art does not disclose or suggest at least “wherein modifying the assembly packet comprises: modifying the assembly packet to include a modified cluster indication; in response to the instruction being the become-base instruction, modifying the assembly

packet to include the become-remote instruction; and in response to the instruction being the become-remote instruction, modifying the assembly packet to include the become-base instruction” as recited in claim 1.

Because Clare, Wesson, and Priest do not disclose or suggest an “assembly packet [that] includes a cluster indication and an instruction, wherein the instruction is either a become-base instruction or a become-remote instruction” as recited in claim 1, Applicants submit the combination of Clare, Wesson, and Priest fails to disclose or suggest all of the functionality recited in claim 1.

Further, Clare, Wesson, and Priest do not disclose or suggest “wherein modifying the assembly packet comprises: modifying the assembly packet to include a modified cluster indication; in response to the instruction being the become-base instruction, modifying the assembly packet to include the become-remote instruction; and in response to the instruction being the become-remote instruction, modifying the assembly packet to include the become-base instruction” as recited in claim 1.

Thus, the combination of Clare, Wesson, and Priest fails to disclose or suggest all of the functionality recited in claim 1. Accordingly, Applicants submit that Clare, Wesson, Priest, and Myer do not support a rejection of claim 1 under 35 U.S.C. § 103. Additionally, Applicants submits the Examiner did not establish a *prima facie* case of obviousness for claim 1 under M.P.E.P. § 2142.

Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 103(a).

**2. Claims 46, 48, 50, 51, 54, and 56 each are patentable over Clare-Wesson-Priest (or Clare-Wesson-Priest in view of Meyer) as the cited art does not disclose or suggest (1) “wherein the assembly packet includes a cluster indication and an instruction, wherein the instruction is either a become-base instruction or a become-remote instruction” and (2) “wherein modifying the assembly packet comprises: modifying the assembly packet to include a modified cluster indication, in response to the instruction being the become-base instruction, modifying the assembly packet to include the become-remote instruction, and in response to the instruction being the become-remote instruction, modifying the assembly packet to include the become-base instruction” as recited in claims 46, 48, 50, 51, 54, and 56, respectively.**

Claim 46 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Clare-Wesson-Priest in view of Myer. Claim 46 recites, *inter alia*, “organizing a plurality of network elements including a start node and at least one sensor node into a plurality of clusters by flooding an assembly packet from the start node.” Applicants have amended claim 46 to clarify that “flooding an assembly packet comprises:

receiving an assembly packet from a first network element at at least one

network element neighboring the first network element, wherein the assembly packet includes a cluster indication and an instruction, wherein the instruction is either a become-base instruction or a become-remote instruction, and

in response to reception of the assembly packet at the at least one network element,

in response to the at least one network element having received a previous assembly packet, the at least one network element ignoring the assembly packet, and

in response to the at least one network element not having received a previous assembly packet, the at least one network element: determining a cluster for the network element based on the cluster indication in the assembly packet, modifying the assembly packet, and transmitting the modified assembly packet to at least one neighboring network element, wherein modifying the assembly packet comprises:

modifying the assembly packet to include a modified cluster indication,

in response to the instruction being the become-base instruction, modifying the assembly packet to include the become-remote instruction, and

in response to the instruction being the become-remote instruction, modifying the assembly packet to include the become-base instruction.”

As described above for claim 1, neither Clare nor Wesson nor Priest disclose or suggest use of assembly packets that “includes a cluster indication and an instruction, wherein the instruction is either a become-base instruction or a become-remote instruction” or flooding an assembly packet that comprises the above-quoted and recited elements of claim 46.

Applicants further submit that Myer does not cure the deficiencies of Clare, Wesson, and Priest.

Thus, the combination of Clare, Wesson, Priest, and Myer fails to disclose or suggest all of the functionality recited in claim 46. Accordingly, Applicants submit that Clare, Wesson, Priest, and Myer do not support a rejection of claim 46 under 35 U.S.C. § 103. Additionally, Applicants submit the Examiner did not establish a *prima facie* case of obviousness for claim 46 under M.P.E.P. § 2142.

Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 46 under 35 U.S.C. § 103(a).

Applicants have amended each of claims 48, 50, 51, 54, and 56 to recite similar functionality to the language of claims 1 and 46 above regarding “flooding an assembly packet.” Also, each of claims 48, 50, 51, 54, and 56 were rejected by the Examiner relying on either the Clare-Wesson-Priest or Clare-Wesson-Priest-Myer combination. Applicants therefore submit that the cited art fails to disclose or suggest the functionality recited in each of claims 48, 50, 51, 54, and 56, for at least the reasons presented for claims 1 and 46. Accordingly, Applicants submit that the cited art does not support a rejection of claims 48, 50, 51, 54, and 56 under 35 U.S.C. § 103. Additionally, Applicants submit the Examiner did not establish a *prima facie* case of obviousness for claims 48, 50, 51, 54, and 56 under M.P.E.P. § 2142.

Applicants therefore respectfully requests the Examiner reconsider and withdraw the rejections of claims 48, 50, 51, 54, and 56 under 35 U.S.C. § 103(a).

Further, Applicants submit that the remarks made above regarding independent claims 1, 46, 48, 50, 51, 54, and 56 apply equally to each of the dependent claims as well.

Some of these dependent claims stand rejected under § 103 in view of certain other references. However, the Applicant submits that these other references do not cure the deficiencies of either of the Clare, Wesson, and Priest combination or the Clare, Wesson, Priest, and Myer combination.

Applicants therefore request the Examiner reconsider and withdraw the rejections of each of the dependent claims under 35 U.S.C. § 103(a).

### **3. Response to the double patenting rejections made by the Examiner**

Applicants submit that all pending claims are allowable over the cited art. Accordingly, Applicants submit that no further response to the provisional double patenting rejections is necessary at this time. Rather, Applicants respectfully request the Examiner hold the provisional double patenting rejections in abeyance.

**Conclusion**

In view of the foregoing, Applicants submits that all pending claims are allowable, and thus Applicants respectfully requests allowance of these claims. Should the Examiner wish to discuss this case, the Examiner is invited to call the undersigned at (312) 913-3338.

Respectfully submitted,

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